

**Department of Environmental Conservation  
Response to Comments**

**For**

**Point Thomson Central Pad – Construction Camp #1**

**APDES Permit No. AK0053660**

**Public Noticed August 17, 2012 – September 17, 2012**

**September 28, 2012**



**Alaska Department of Environmental Conservation  
Wastewater Discharge Authorization Program  
555 Cordova Street  
Anchorage, AK 99501**

## **1 Introduction**

### **1.1 Summary of Facility / Permit**

Exxon Mobil Corporation (ExxonMobil) is in the process of evaluating and developing hydrocarbon resources at Point Thomson, which is located on the eastern North Slope adjacent to the Beaufort Sea. Historic site activities to date include construction of a 13-acre pad (called the Central Pad) and limited hydrocarbon exploration activities. Starting in the winter of 2012, ExxonMobil will begin expanding the Central Pad to a 56-acre pad as well as begin the construction of an initial production system. Construction is expected to last approximately three years and will require the staging of several construction camps over time, including: a 32-person camp, a 340-person construction camp, and a 200-person construction camp that will later become a long-term 74-person operations-based camp.

These camps will be operated independently and will be relocated onsite as needed to accommodate systematic expansion of the Central Pad and construction of the initial production system. Each camp will discharge treated domestic wastewater and drinking water backwash (industrial wastewater) through a common outfall. The point of discharge may be to either Lion Bay of the Beaufort Sea or the nearby unnamed freshwater lake as these facilities are relocated to accommodate Central Pad expansion. At a future time, it is anticipated that the subject wastestreams will be disposed of through a to-be-constructed authorized underground injection control well.

This Alaska Pollutant Discharge Elimination System (APDES) permit is a first time issuance. The subject APDES permit is for the aforementioned 340-person construction camp. As previously mentioned, the permit will regulate the discharge of treated domestic and industrial wastewater to surface water. Relatively small volumes of treated wastewater will be discharged to either fresh or marine water. The permit is structured to regulate discharges to either receiving water type (i.e. fresh or marine) depending on the final location of the outfall. No mixing zone or other regulatory water quality variance has been authorized as part of this permitting action.

### **1.2 Opportunities for Public Participation**

The Alaska Department of Environmental Conservation (DEC or the Department) proposed to issue an APDES wastewater discharge permit to ExxonMobil for the Point Thomson Central Pad – Construction Camp #1. To ensure public, agency, and tribal notification and opportunities for participation, the Department:

- identified the permit on the annual Permit Issuance Plan posted online at:  
<http://www.dec.state.ak.us/water/wwdp/index.htm>
- notified potentially affected tribes via letter, fax and/or email that the Department would be working on this permit

- posted a preliminary draft of the permit online for a 10-day applicant review on July 17, 2012 and notified tribes and other agencies
- posted a public notice and a draft permit online for a 30-day public notice and comment period on August 17, 2012 and notified tribes and other agencies
- posted a public notice and a draft permit online for a 30-day public notice and comment period on September 25, 2012 and other agencies
- sent email notifications via the APDES Program List Serve when the preliminary draft, draft and proposed final permits were available for review.

The Department received comments from one interested party (the applicant, ExxonMobil) on the draft permit and supporting documents. The Department also requested comment from the Alaska Departments of Natural Resources (DNR) and Fish and Game (DFG), the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, and the U.S. Environmental Protection Agency (EPA). In addition to the comments submitted ExxonMobil, the Department also received comments from EPA.

This document summarizes the comments submitted and the justification for any action taken or not taken by DEC in response to the comments.

### **1.3 Final Permit**

The final permit was adopted by the Department on September 28, 2012. There were minor changes from the public noticed permit. Changes are identified in the response to comments and reflected in the final permit and fact sheet.

## **2 Summary of Comments Submitted**

### **Comment Summary**

The Department received comments providing additional refinements to the language presented in the permit and fact sheet. Comments were also submitted requesting clarification and additional explanation.

#### **Response:**

The Department appreciates the comments submitted. The comments will improve the accuracy and quality of the final APDES permit and fact sheet.

## **3 Comment on Type of Membrane Bioreactor**

### **Comment Summary**

ExxonMobil stated that the Department inaccurately called the membrane bioreactor (MBR) a “submerged” MBR opposed to a “tubular” MBR on page 29 of the fact sheet (Section B.1.1).

#### **Response:**

The Department has corrected the language to accurately characterize the MBR as a “tubular” MBR.

## 4 Comment on Latitude and Longitude of Outfalls

### Comment Summary

ExxonMobil commented that very minor refinements to two outfall locations have occurred. In response, ExxonMobil provided updated outfall latitude and longitude information for Outfalls 001A/B and 003A/B.

#### Response:

The Department has updated page 1 of the permit to reflect the new outfall locations.

## 5 Comments Requesting Clarification/Consistency for Table Footnotes in the Permit and Fact Sheet

### Comment Summary

The Department received comments from ExxonMobil requesting that footnotes in Tables 3 through 7 of the fact sheet and Tables 2 through 6 of the permit be consistent, clarified or further explained. In general, comments were in relation to the total residual chlorine (TRC) footnotes (the use of the phrase total chlorine residual vs. the use of the acronym TRC) and footnote “a” of the Additional Monitoring to Support Future Applications of Reissuance Table (which parameters actually have to be monitored concurrently).

#### Response:

The Department has reviewed the comments received and made revisions where appropriate to the applicable tables. Note: due to the interaction of certain chemical constituents (e.g. the interrelationship of total dissolved solids and total chlorides and sulfates in freshwater), in some cases, supplemental chemical data must be gathered in effort to accurately characterize the concentration of a constituent.

## 6 Comment Relating to Whole Effluent Toxicity (WET) in the Antidegradation Analysis

### Comment Summary

The Department received a comment from EPA suggesting that since WET data has not been collected from the facility’s effluent, it’s inappropriate to state that the WET criterion will not be exceeded. The commentor suggests that either WET testing be incorporated as a requirement of the permit, or that language be modified to read the WET criterion is “not expected to be exceeded.”

#### Response:

Currently, the language states that “reducing water quality is not expected to violate the whole effluent toxicity limit in 18 AAC 70.030.” After a thorough evaluation of the information provided in the APDES application (i.e. a high level of advanced wastewater treatment will occur at the facility), in addition to the fact that the applicant did not request a mixing zone and accordingly projects meeting water quality criteria at the end-of-pipe prior to surface water discharge, the Department concluded that WET monitoring is not necessary and that finding 18 AAC 70.015(a)(2)(B) is satisfied.

However, the Department has established effluent limits and monitoring requirements for other specific “indicator” pollutants (e.g. TRC and total dissolved solids) to evaluate pollutants associated with these wastestreams that have the highest likelihood of imparting any toxicity. The preceding sentence has been added to Section 4.5 of the fact sheet.

## 7 Comment Regarding Temperature

### Comment Summary

EPA commented that DEC’s earlier response to EPA’s comment on temperature was confusing. EPA clarified that since temperature data was included in Tables 1 and 2 of the fact sheet, it should have been discussed in Section B.3.4.1 of the fact sheet as a potential parameter of concern. The subject discussion should clarify whether temperature will be limited or whether additional monitoring will be conducted.

#### Response:

Section B.3.4.1 of the fact sheet provides narrative regarding specific water quality-based effluent limits for conventional and toxic substances. The Department determined that there is no basis of concern for limiting temperature in this APDES permitting action, but rather that monitoring only should be conducted to gather more information for future temperature evaluations. Therefore, it is not necessary to discuss temperature monitoring in the water quality-based effluent limit section of the fact sheet document. However, in response to the comment, DEC has added a sentence in Section 4.2 of the fact sheet that discusses temperature as a potential pollutant of concern.

## 8 Comment Regarding the Calculation of Water Quality-Based Effluent Limits (WQBELs) without Data

### Comment Summary

EPA commented that the fact sheet should not state that effluent limits cannot be calculated without actual effluent data. Per EPA’s *Technical Support Document for Water Quality-based Toxics Control* (TSD), all that is necessary to calculate limits is the water quality criteria and a coefficient of variation of 0.6. Further, EPA is concerned of setting a precedent of using water quality criteria as the effluent limit if no mixing zone is authorized.

#### Response:

DEC is aware that the TSD allows for the calculation of WQBELs without actual effluent data (Chapters 3-5). In addition, Section B.3.3 of the fact sheet implicitly discusses the option of calculating effluent limits without actual effluent data. However, the TSD also provides the permitting authority discretion as to whether WQBELs be calculated without data, or whether the permitting authority finds it appropriate to include monitoring during the permit cycle to collect additional data to evaluate the need for calculating WQBELs during subsequent permit issuance. In this permitting scenario, without actual effluent data, DEC determined that it is appropriate to both limit pollutants that have a high likelihood of causing or contributing to excursions of applicable water quality criteria as well as monitor other

pollutants that have a much lower likelihood of potential water quality excursions. When protective of water quality, this is a common approach used by DEC in setting limits and monitoring requirements in APDES permits.

DEC specifically implemented effluent limits in the permit by setting the limits as the applicable water quality criteria (since no dilution allowance is afforded via an authorized mixing zone), which the TSD also discusses as an option for the permitting authority. EPA's main concern with respect to this approach is that it is potentially possible (in some scenarios) that setting the water quality criteria as the effluent limit may not actually be protective of the criteria itself, and that the statistics provided in the TSD for the calculation of effluent limits without data, in these scenarios, do provide protection of the established criteria. DEC acknowledges this is a potential concern; however, in this permitting scenario, calculations conducted according to the methodology presented in the TSD (without data) result in less stringent effluent limits than the established criteria. Accordingly, DEC is retaining the criteria-based effluent limits. However, the following statement has been included in paragraph two of Section B.3.3 of the fact sheet to address the concerns raised by EPA, "These limits are protective of both the chronic and acute water quality criteria."